

REMARKS

Claims 1-23 are pending in the present patent application. Claims 1-23 stand rejected. This application continues to include claims 1-23.

Claims 1-5, 9, 10, 12, 14, and 17 were rejected under 35 U.S.C. §102(b) as being anticipated by Russell, et al., U.S. Patent No. 5,537,550 (hereinafter, Russell). Applicants respectfully request reconsideration of the rejection of claims 1-5, 9, 10, 12, 14, and 17 in view of the following.

Russell is directed to a circuit board which is coupled to a local area network peripheral (e.g. a printer), which allows the peripheral to be an intelligent, interactive network member eliminating the necessity of dedicating a personal computer to manage the peripheral, and which provides for automatically logging and for remotely accessing operational statistics about the peripheral (col. 1, lines 9-16). Russell discloses a network expansion board (NEB) 2 coupled to a printer 4 and a LAN bus 6 via a LAN interface 8 (col. 3, lines 62-66, Fig. 1). Also connected to LAN 6 are PCs 10, 12, 14, 18, and 22, and a printer 24. PC 14 acts as a network administrator, and PC 18 acts as a print server (col. 4, lines 2-8). PCs 10 and 12 may create files that are routed to a file server 30, which orders the data files and transfers them to a printer 24 upon a command from a print server in PC 18 (col. 4, lines 30-34). NEB 2 includes a microprocessor 216, a serial port 218, RAM 220, EPROM 222, SCSI controller 224, printer expansion port 226, and diagnostics/failure LED 240 (col. 9, lines 1-7). NEB 2 is capable of multi-protocol operation, for example, in a combined Novell/UNIX multiprotocol environment (col. 28, line 57 to col. 29, line 31, Fig. 11). During operation, once a server has enough print information to require use of the printer, it seizes exclusive control of the printer, and signals other servers accordingly, retaining exclusive control over the printer until its job

queue has been emptied (col. 30, line 59 to col. 31, line 7). Alternatively, it may release control after a print job in order to allow another server to perform a print job (col. 31, lines 10-20).

Applicants believe that claims 1-5, 9, 10, 12, 14, and 17 patentably define Applicants' invention over Russell for at least the reasons set forth below.

Claim 1 is directed to a method of sharing a printer between a plurality of users on a computer network. Claim 1 recites, in part, attaching host-based networking hardware to the printer. A *host-based* networking hardware in accordance with the present invention eliminates the need for a protocol-processing engine, such as a central processing unit, which significantly reduces the cost of the printer (see Applicants' specification at page 2, lines 16-18). In contrast, Russell discloses a network enhancement board (NEB) 2 coupled to a printer (col. 3, lines 63-64), wherein NEB 2 *includes a microprocessor 216*, (col. 9, lines 1-7), and is capable of multi-protocol operation, for example, in a combined Novell/UNIX multiprotocol environment (col. 28, line 57 to col. 29, line 31, Fig. 11). Accordingly, Russell does not disclose, teach, or suggest attaching a *host-based* networking hardware to the printer, as recited in claim 1.

Claim 1 also recites, in part, allowing only one of the users to own the data channel at any single point in time. The Examiner asserts that Russell discloses allowing only one of the users to own the data channel at any single point in time, relying upon Russell at column 30, line 66 to column 31, line 5. In contrast to allowing only one of the users to own the data channel at any single point in time, as recited in claim 1, the relied upon passages in the Russell specification disclose that a server may seize exclusive control of the printer, and signal other servers accordingly. The Russell server that may seize exclusive control of the

printer is not a user, but rather, is a server that receives data files created at PC's 10 and 12 (col. 4, lines 30-34), which are thus analogous to users. Thus, Russell does not disclose, teach, or suggest allowing only one of the users to own the *data channel* at any single point in time, as recited in claim 1.

Moreover, claim 1 also recites, in part, instructing the host-based networking hardware to accept information on the data channel only from the user that owns the data channel. In contrast, Russell discloses that the server that seizes exclusive control over the printer sends signals to other servers accordingly, to thereby prevent contention problems whereby other servers try to insert print jobs. (See Russell, column 30, line 66 through column 31, line 5). Thus, it is the other servers in the Russell disclosure that are instructed against submitting print jobs by the server having exclusive control of the printer, in contrast to instructing the host-based networking hardware coupled to the printer to accept information on the data channel only from the user that owns the data channel, as recited in claim 1.

Accordingly, for at least the reasons set forth above, Applicants respectfully submit that Russell does not disclose, teach, or suggest the subject matter of claim 1. Claim 1 is thus believed allowable in its present form.

Claims 2-5, 9, 10, 12, and 14 are believed allowable due to their dependence, directly or indirectly, on otherwise allowable base claim 1. In addition, claims 2-5, 9, 10, 12, and 14 further and patentably define the invention over Russell.

For example, claim 3 is directed to the method of claim 1, wherein the host-based networking hardware responds to a command on the command channel from any of the users.

Applicants respectfully submit that Russell does not disclose, teach, or suggest the subject matter of claim 3. However, the Examiner asserts that Russell discloses wherein the host-

based networking hardware responds to a command on the command channel from any of the users at column 39, line 60 through column 40, line 4, which is Russell step S1606.

Applicants respectfully direct the Examiner's attention to column 40, lines 4-6, where Russell indicates that step S1606 is described in greater detail with respect to steps S1607 to S1620, which are discussed from column 40, line 7 to column 43, line 56. In the passages from column 40, line 7 to column 43, line 56, including tables 9-15, it is clear that the commands sent to CPSOCKET in printer 4 are generated by CPINIT and PCONSOLE of the network administrator PC 14, and is not a response to a command on the command channel from any of the users, e.g., PCs 10 and 12. For example, see Fig. 1, wherein PCONSOLE and CPINIT are associated with network administrator PC 14, and CPSOCKET is associated with printer 4 having NEB 2.

Accordingly, Russell does not disclose, teach, or suggest wherein the host-based networking hardware responds to a command on the command channel from any of the users. Claim 3 is thus believed allowable in its own right.

Claim 5 is directed to the method of claim 4, wherein the status response indicates the user that owns the data channel. Russell does not disclose, teach, or suggest the subject matter of claim 5. However, the Examiner asserts that Russell discloses wherein the status response indicates the user that owns the data channel at column 40, lines 50-56. For substantially the same reasons as set forth above with respect to claim 3, in contrast to wherein the status response indicates the user that owns the data channel, the relied-upon passage of Russell pertains to communications between printer 4 and administrator PC 14, not the users, e.g., PCs 10 and 12. For example, Russell does not disclose, teach, or suggest at column 40, lines 50-56 that a status response, in response to a command on the command channel from any of

the users, as recited in claim 3 from which claim 5 indirectly depends, is sent to either of PCs 10 or 12.

Accordingly, claim 5 is believed allowable in its own right.

Claim 10 is directed to the method of claim 9, comprising the further step of sending the communication frame from the user that owns the data channel to the host-based networking hardware. In contrast to sending the communication frame from the user that owns the data channel to the host-based networking hardware, Russell discloses PCs 10 and 12 may create files that are routed to a file server 30, which orders the data files and transfers them to a printer 24 upon a command from a print server in PC 18 (col. 4, lines 30-34). Thus, the corresponding Russell “users,” PCs 10 and 12, do not transmit a communication frame to a computer network that is received by the network appliance, but rather, transmits data files to a file server 30, which are then sent to the printer on command of print server PC 18.

Accordingly, claim 10 is believed allowable in its own right.

Claim 12 is directed to the method of claim 10, wherein the communication frame has a frame number and a sequence number, the host-based networking hardware discarding any said communication frame that does not have an expected said sequence number. Russell does not disclose, teach, or suggest the subject matter of claim 12. However, the Examiner asserts that Russell discloses wherein the communication frame has a frame number and a sequence number, the host-based networking hardware discarding any communication frame that does not have an expected sequence number at column 27, lines 46-57.

The relied-upon passage of Russell does not disclose, teach, or suggest wherein the communication frame has a frame number and a sequence number, but rather, only discloses that the LAN communication packet includes an IPX header, the first two bytes of which

always has the value “FFFF.” In addition the relied-upon passage does not disclose, teach, or suggest host-based networking hardware discarding any communication frame that does not have an expected said sequence number, but rather, discloses monitoring and storing the packet type for use by other network communication programs.

Accordingly, claim 12 is believed allowable in its own right.

Claim 14 is directed to the method of claim 10, wherein a timeout occurs when the host-based networking hardware does not receive said communication frame within a predetermined time period. Russell does not disclose, teach, or suggest the subject matter of claim 14. However, the Examiner asserts that Russell discloses wherein a timeout occurs when the host-based networking hardware does not receive the communication frame within a predetermined time period at column 35, lines 5-8. Russell discloses, at column 35, lines 5-8, merely that there is a job time-out setting in the printer, which does not disclose, teach, or suggest the conditions under which a time-out occurs, much less wherein a timeout occurs when the host-based networking hardware does not receive the communication frame within a predetermined time period.

Accordingly, claim 14 is believed allowable in its own right.

Claim 17 is directed to a method of sharing a network appliance between a plurality of users on a computer network. Claim 17 recites, in part, allowing only one of the users to own the data channel at any single point in time; and instructing the network appliance to accept information on the data channel only from the user that owns the data channel. For substantially the same reasons as set forth above with respect to claim 1, Russell does not disclose, teach, or suggest allowing only one of the users to own the data channel at any single

point in time; and instructing the network appliance to accept information on the data channel only from the user that owns the data channel, as recited in claim 17.

Accordingly, for at least the reasons set forth above, Applicants believe that claims 1-5, 9, 10, 12, 14, and 17 are in condition for allowance in their present form, and thus respectfully request that the rejection of claims 1-5, 9, 10, 12, 14, and 17 under 35 U.S.C. 102(b) be withdrawn.

Claims 6-8, 11, 13, 15, 16, and 18-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Russell in view of Kumpf, U.S. Patent No. 6,370,592 B1. Applicants respectfully request reconsideration of the rejection of claims 6-8, 11, 13, 15, 16, and 18-23 in view of the following.

Kumpf is directed to a network interface device which allows peripherals to utilize network transport services (col. 1, lines 8-10). Kumpf discloses peripheral equipment 33 connected to an input/output (I/O) device 34 (col. 4, lines 33-34, Fig. 3). The interface between peripheral equipment 33 and I/O device 34 utilizes the Xport Interface Protocol, Version 2 (XIP) protocol (col. 4, lines 35-37). Peripheral equipment 33 is a scanner or a printer, for example, and interface device 34 is, for example, an interface card which plugs into peripheral equipment 33 (col. 4, lines 40-42). An input/output (I/O) driver 56 within I/O device 34 is used to communicate with I/O driver 55 of peripheral equipment 33 and to communicate with network connection services through a XIP gateway module 41 (col. 4, lines 43-46).

Applicants believe that claims 6-8, 11, 13, 15, 16, and 18-23 patentably define Applicants' invention over Russell in view of Kumpf for at least the reasons set forth below.

Claim 6 is directed to the method of claim 1, wherein the user that owns the data channel can release the data channel by sending one of a close signal and a terminate signal on the command channel to the host-based networking hardware. Russell in view of Kumpf do not disclose, teach, or suggest the subject matter of claim 6. The Examiner acknowledges that Russell does not disclose the subject matter of claim 6. In rejecting claim 6, the Examiner relies solely on Kumpf, asserting that Kumpf discloses wherein the user that owns the data channel can release the data channel by sending one of a close signal and a terminate signal on the command channel to the host-based networking hardware at column 19, lines 18-25.

However, the Kumpf passage relied upon by the Examiner pertains to messages exchanged between XIP API module 54 and XIP gateway module 41 (col. 6, lines 14-15, Fig. 2, and Table 41 - see headings "Messages initiated by Peripheral Equipment 33" and "Messages initiated by I/O device 34"), not between a user that owns the data channel and the host-based networking hardware. In addition, in contrast to sending one of a close signal and a terminate signal, as recited in claim 1, the relied-upon Kumpf passage discloses a message that begins an orderly connection release, also known as a half-close. A half-close is not a close, since data can still arrive (col. 27, lines 49-50).

Accordingly, Applicants respectfully submit that the cited references, Russell in view of Kumpf, taken alone or in combination, do not disclose, teach, or suggest wherein the user that owns the data channel can release the data channel by sending one of a close signal and a terminate signal on the command channel to the host-based networking hardware, as recited in claim 6. Claim 6 is thus believed allowable in its present form.

In addition, claim 6 is believed allowable due to its dependence on otherwise allowable base claim 1.

Claim 7 is directed to the method of claim 6, wherein a print job is aborted in response to the terminate signal. Russell in view of Kumpf does not disclose, teach, or suggest the subject matter of claim 7. The Examiner acknowledges that Russell does not disclose the subject matter of claim 7. In rejecting claim 7, the Examiner relies solely on Kumpf, asserting that Kumpf discloses wherein a print job is aborted in response to the terminate signal, relying on Kumpf at column 29, lines 18-35.

However, the Kumpf passage relied upon by the Examiner pertains to messages exchanged between XIP API module 54 and XIP gateway module 41 (col. 6, lines 14-15, Fig. 2, and Table 41 - see headings "Messages initiated by Peripheral Equipment 33" and "Messages initiated by I/O device 34"), not to a terminate signal sent from a user that owns the data channel to the host-based networking hardware. In addition, although the relied-upon Kumpf passage describes a remote abort, it does not disclose, teach, or suggest that the remote abort is in response to a terminate signal from the user that owns the data channel.

Accordingly, Applicants respectfully submit that the cited references, Russell in view of Kumpf, taken alone or in combination, do not disclose, teach, or suggest wherein a print job is aborted in response to the terminate signal, as recited in claim 7. Claim 7 is thus believed allowable in its present form.

In addition, claim 7 is believed allowable due to its dependence on otherwise allowable base claim 1 and/or intervening claim 6.

Claim 8 is directed to the method of claim 6, wherein a user that does not own the data channel can acquire the data channel by sending a connect signal on the command channel to the host-based networking hardware. Russell in view of Kumpf does not disclose, teach, or suggest the subject matter of claim 8. The Examiner acknowledges that Russell does not

disclose the subject matter of claim 8. In rejecting claim 8, the Examiner relies solely on Kumpf, asserting that Kumpf discloses wherein a user that does not own the data channel can acquire the data channel by sending a connect signal on the command channel to the host-based networking hardware at column 26, lines 22-35.

However, the Kumpf passage relied upon by the Examiner pertains to messages exchanged between XIP API module 54 and XIP gateway module 41 (col. 6, lines 14-15, Fig. 2, and Table 35 - see headings "Messages initiated by Peripheral Equipment 33" and "Messages initiated by I/O device 34") that take place in response to a connection request from remote host 82, but does not disclose, teach, or suggest that the remote host 82 is a user that does not own the data channel.

Accordingly, Applicants respectfully submit that the cited references, Russell in view of Kumpf, taken alone or in combination, do not disclose, teach, or suggest wherein a user that does not own the data channel can acquire the data channel by sending a connect signal on the command channel to the host-based networking hardware, as recited in claim 8. Claim 8 is thus believed allowable in its present form.

In addition, claim 8 is believed allowable due to its dependence on otherwise allowable base claim 1 and/or intervening claim 6.

Claim 11 is directed to the method of claim 10, wherein the host-based networking hardware sends an acknowledgement of receiving the communication frame to the user that owns the data channel. Russell in view of Kumpf does not disclose, teach, or suggest the subject matter of claim 11. The Examiner acknowledges that Russell does not disclose the subject matter of claim 11. In rejecting claim 11, the Examiner relies solely on Kumpf, asserting that Kumpf discloses wherein the host-based networking hardware sends an

acknowledgement of receiving the communication frame to the user that owns the data channel at column 26, lines 45-46.

However, the Kumpf passage relied upon by the Examiner pertains to messages exchanged between XIP API module 54 and XIP gateway module 41 (col. 6, lines 14-15, Fig. 2, and Table 35 - see headings "Messages initiated by Peripheral Equipment 33" and "Messages initiated by I/O device 34") that take place in response to a connection request from remote host 82, not an acknowledgement from the host-based networking hardware *to a user that owns the data channel.*

Accordingly, Applicants respectfully submit that the cited references, Russell in view of Kumpf, taken alone or in combination, do not disclose, teach, or suggest wherein the host-based networking hardware sends an acknowledgement of receiving the communication frame to the user that owns the data channel, as recited in claim 11. Claim 11 is thus believed allowable in its present form.

In addition, claim 11 is believed allowable due to its dependence on otherwise allowable base claim 1 and/or intervening claims 9 and 10.

Claim 13 is directed to the method of claim 12, wherein, in response to receiving said communication frame that does not have said expected sequence number, the host-based networking hardware sends an acknowledgement including the frame number of a last successfully received communication frame to the user that owns the data channel. Russell in view of Kumpf does not disclose, teach, or suggest the subject matter of claim 13. The Examiner acknowledges that Russell does not disclose the subject matter of claim 13. In rejecting claim 13, the Examiner relies solely on Kumpf, asserting that Kumpf discloses wherein, in response to receiving the communication frame that does not have the expected

sequence number, the host-based networking hardware sends an acknowledgement including the frame number of a last successfully received communication frame to the user that owns the data channel at column 13, lines 29-50.

However, the Kumpf passage relied upon by the Examiner pertains to messages exchanged between XIP API module 54 and XIP gateway module 41 (col. 6, lines 14-15, Fig. 2), not an acknowledgement sent from the host-based networking hardware to the user that owns the data channel. In addition, the relied-upon passage does not even mention, much less disclose, teach, or suggest an acknowledgement *including the frame number of a last successfully received communication frame*, as recited in claim 13.

Accordingly, Applicants respectfully submit that the cited references, Russell in view of Kumpf, taken alone or in combination, do not disclose, teach, or suggest wherein, in response to receiving said communication frame that does not have said expected sequence number, the host-based networking hardware sends an acknowledgement including the frame number of a last successfully received communication frame to the user that owns the data channel, as recited in claim 13. Claim 13 is thus believed allowable in its present form.

In addition, claim 13 is believed allowable due to its dependence on otherwise allowable base claim 1 and/or intervening claims 9, 10, and 12.

Claim 15 is directed to the method of claim 14, wherein the host-based networking hardware aborts a print job after a third said timeout. Russell in view of Kumpf does not disclose, teach, or suggest the subject matter of claim 15. The Examiner acknowledges that Russell does not disclose the subject matter of claim 15. In rejecting claim 15, the Examiner relies solely on Kumpf, asserting that Kumpf discloses wherein the host-based networking hardware aborts a print job after a third said timeout at column 35, lines 40-62.

However, the Kumpf passage relied upon by the Examiner does not even mention aborting a print job or a timeout, much less wherein the host-based networking hardware aborts a print job after a third timeout.

Accordingly, Applicants respectfully submit that the cited references, Russell in view of Kumpf, taken alone or in combination, do not disclose, teach, or suggest wherein the host-based networking hardware aborts a print job after a third said timeout, as recited in claim 15. Claim 15 is thus believed allowable in its present form.

In addition, claim 15 is believed allowable due to its dependence on otherwise allowable base claim 1 and/or intervening claims 9, 10, and 14.

Claim 16 is directed to the method of claim 15, wherein the host-based networking hardware releases the data channel after the print job is aborted. Russell in view of Kumpf does not disclose, teach, or suggest the subject matter of claim 16. The Examiner acknowledges that Russell does not disclose the subject matter of claim 16. In rejecting claim 16, the Examiner relies solely on Kumpf, asserting that Kumpf discloses wherein the host-based networking hardware releases the data channel after the print job is aborted at column 27, lines 40-58.

However, the relied-upon Kumpf passage merely discloses that there are two ways to disconnect a stream, orderly and abortive, and describes each. However, the discussion simply does not disclose, teach, or suggest a print job, or a print job being aborted, much less wherein the host-based networking hardware releases the data channel after the print job is aborted.

Accordingly, Applicants respectfully submit that the cited references, Russell in view of Kumpf, taken alone or in combination, do not disclose, teach, or suggest wherein the host-

based networking hardware releases the data channel after the print job is aborted, as recited in claim 16. Claim 16 is thus believed allowable in its present form.

In addition, claim 16 is believed allowable due to its dependence on otherwise allowable base claim 1 and/or intervening claims 9, 10, 14, and 15.

Claim 18 is directed to a method of sharing a network appliance between a plurality of users on a computer network. Claim 18 recites, in part, using one of the users to transmit a data frame into the computer network; receiving the data frame with said network appliance; and discarding the data frame without reading and processing the second portion of the data frame if the first portion of the data frame does not include the predetermined sequence of data. The Examiner acknowledges that Russell does not disclose, teach, or suggest discarding the data frame without reading and processing the second portion of the data frame if the first portion of the data frame does not include the predetermined sequence of data, but asserts that Kumpf does so at column 31, lines 30-37. However, the Kumpf passage at column 31, lines 30-37 pertains to communications between peripheral equipment 33 and its associated I/O device 34 that are messages initiated by peripheral equipment 33 and/or associated I/O device 34 (see Kumpf table 46), not to a data frame transmitted by a user and received by the network appliance.

Accordingly, the cited references, Russell in view of Kumpf, taken alone or in combination, do not disclose, teach, or suggest discarding the data frame without reading and processing the second portion of the data frame if the first portion of the data frame does not include the predetermined sequence of data, as recited in claim 18.

Accordingly, for at least the reasons set forth above, Applicants respectfully submit that the cited references, Russell in view of Kumpf, taken alone or in combination, do not

disclose, teach, or suggest the subject matter of claim 18. Claim 18 is thus believed allowable in its present form.

Claims 19-23 are believed allowable due to their dependence, directly or indirectly, on otherwise allowable base claim 18. In addition, claims 19-23 further and patentably define the invention over the cited references, Russell in view of Kumpf, taken alone or in combination.

Accordingly, for at least the reasons set forth above, Applicants believe that claims 6-8, 11, 13, 15, 16, and 18-23 are in condition for allowance in their present form, and thus respectfully request that the rejection of claims 6-8, 11, 13, 15, 16, and 18-23 under 35 U.S.C. 103(a) be withdrawn.

For the foregoing reasons, Applicants submit that no combination of the cited references teaches, discloses or suggests the subject matter of the pending claims. The pending claims are therefore in condition for allowance, and Applicants respectfully request withdrawal of all rejections and allowance of the claims.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally petition therefor and authorize that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.

Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (317) 894-0801.

Respectfully submitted,



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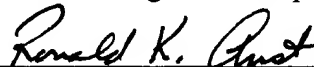
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Name of Registered Representative



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Date